

COMPARISON OF GEODETIC GPS MEASUREMENT AND WATERPASS DATA CASE STUDY OF DRAINAGE MEASUREMENTS JL. POROS SEI ALAM – SELAT BARU

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ABSTRACT

Soil surveying is a part of geodesy which studies methods of measurement on the earth's surface and below the ground to determine the relative or absolute position of points on the ground surface, above or below it, in meeting needs such as mapping and determining the relative position of an object. area.

With the development of measurement science, the use of modern or digital tools cannot be avoided. However, it is necessary to correct the comparison between manual measuring tools and modern or modern measuring instruments, in this case geodetic GPS compared to a waterpass.

To support this research, data are needed such as: coordinate data from geodetic GPS, elevation of measurements using geodetic GPS and waterpass, duration of measurements using geodetic GPS and waterpass along the same measurement.

From the results of research conducted on Jl. Poros Sei Alam-Selat Baru, the highest elevation obtained from geodetic GPS is 5.3374 meters, from the waterpass is 5.1349 meters. The lowest elevation from geodetic GPS is 0.504 meters and from the waterpass is 0.234 meters. The duration of measurement using geodetic GPS is less than the waterpass, namely geodetic GPS \pm 4 hours and waterpass \pm 7 hours.

Keywords: Comparison of measuring data, Geodetic GPS, Waterpass